OPERATING INSTRUCTIONS

for the labelcutter and labelfinisher

Secabo LC30

Congratulations on the purchase of your Secabo labelcutter!
Please carefully read the operating manual to easily integrate your unit into your production environment.
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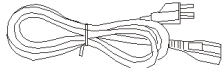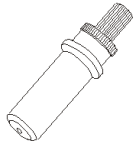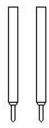
Version 1.0 (10.11.2015)

Safety measures

Please read the information and safety measures carefully prior to initial operation of the unit!

- Do not place any magnetic objects in the vicinity of the cutting head; otherwise uniform contact pressure is not ensured.
- Do not remove the connection cable to the computer while plotting is in progress.
- Relieve the pressure on the pressure rollers when not in use by moving the pressure lever up.
- Do not reach into the unit when it is connected to electricity supply.
- Never open the casing and do not make any modifications to the unit yourself.
- Ensure that neither liquids nor metal objects are put inside the vinyl cutter.
- Ensure that the wall socket used is grounded and protected with a ground fault switch.
- Ensure that the connected voltage (220V) does not deviate by more than ±10%. Otherwise install a voltage stabilizer.
- Pull the power plug if the unit will not be in use for a longer period of time.
- Never reach into the unit in the vicinity of the blade holder during the cutting operation!
- Discontinue any printing jobs in progress before readjusting the blade holder!
- Always ensure that the vinyl cutter is out of reach of children during operation and never leave the unit or individual parts of it switched on without supervision.
- Do not touch the tip of the sliding blade to avoid injury.
- Always place the unit on a stable base to prevent it from falling down.
- Do not operate the unit during thunderstorms; it can be damaged or destroyed by lightning.

Items Included

Before starting work, please check whether the following items are all present:

Article	Quantity	
labelcutter	1	
Power cable	1	
USB connection cable	1	
Blade holder	1	
Pen holder	1	
Drag knife 30°, 45°, 60°	3	
Clamping element	6	
Acrylic glass plate	6	
Rubber feet	4	
Certificate of DrawCut license	1	

Machine parts and their function
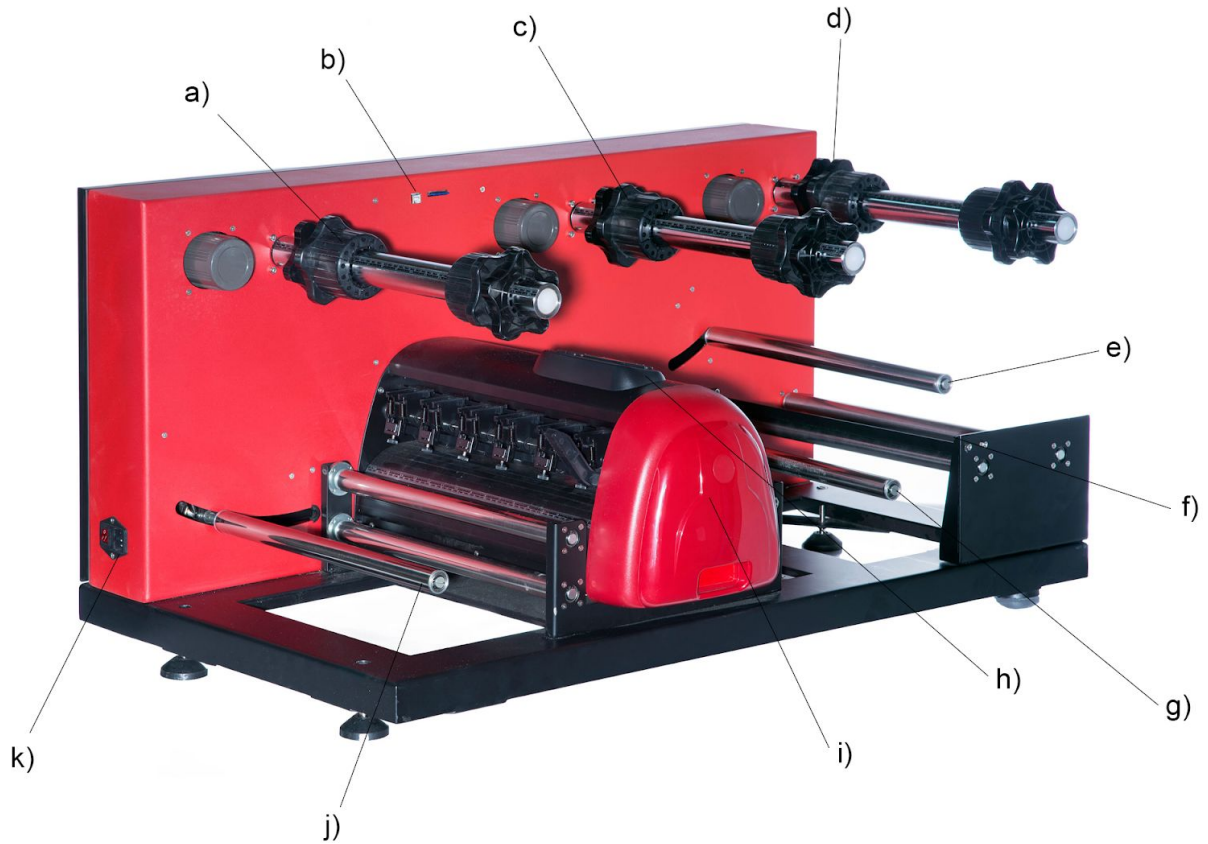
a) Winding shaft with clamping elements
b) USB port
c) Winding shaft for excess foil
d) Winding shaft for finished labels
e) Dancer roller for clamping winding finished excess foil
f) Strip edge for excess foil
g) Dancer roller for winding finished labels
h) Control panel cutting unit
i) Cutting unit
j) Dancer roller for winding
k) Electricity connection and switch

Control panel

Initial operation of machine and software

Caution! Please note that the smooth installation and complete configuration requires DrawCut LabelStudio to be installed first.

Installation DrawCut LabelStudio

Your Secabo LC30 labelcutter is delivered with the cutting software DrawCut LabelStudio. This software must be activated over the Internet. You do not necessarily need Internet access on the computer, on which DrawCut will be installed. The activation can also be performed via another computer.

In order to control your LC30 via your computer, install the software as described in the following:

- Disable the Windows Firewall as well as your anti-virus software for the duration of the installation.
- Download the current version of DrawCut LabelStudio at http://www.draw-cut.com/#downloads and follow the installation wizard.
- Find your DrawCut LabelStudio 26-digit serial number on the printout that was delivered with your Secabo LC30. Enter it when you are prompted to do so.
- Now you can use DrawCut LabelStudio.

Installation of your Secabo LC30 in DrawCut LabelStudio

Please keep in mind that your Secabo LC30 can only be operated under Windows XP, Windows Vista, Windows 7, Windows 8, Windows 8.1 and Windows 10. Operation with an older version of Windows is not possible.

- Connect the Secabo LC30 to your computer via the supplied USB cable.
- Switch on the device.

- Your Secabo LC30 will now be recognized. Windows will search for the appropriate drivers and automatically install them. This can take some time. After that, the device is ready for operation.
- Start DrawCut LabelStudio

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- Drawcut LabelStudio immediately recognizes the Secabo LC30, a manual installation is not necessary.

Initial operation of machine

- Unpack the LC30 labelcutter and place it on a stable surface. Avoid lifting the unit by its shafts and axes. Instead, only lift it by its base plate at the bottom.
- Mount the supplied rubber feet by lifting the unit on one side and, one by one, screwing the feet into the holes provided for this purpose from the bottom. The loose nut provided on each foot is used for locking and fixing, once the final position is set.

- Thread the clamping elements for the cardboard tubes onto the three main shafts. Each of the six clamping elements can be equipped with an acrylic glass plate for guiding the foil.

- Connect the LC30 to a 230 V socket via the supplied power cable.
- Now connect the LC30 to the computer on which you previously installed DrawCut LabelStudio using a USB cable.
- Now switch on the device.

Installing and adjusting the blade

- Take one of the supplied cutting blades and place it in the blade holder in such a way, that the sharp side extends at the front.
- Now set the cutting depth by turning the screw at the upper end of the blade holder.
- Initially, the depth is correctly set if you can carefully move your fingertip across the blade and feel only a light scratching. Since the depth adjustment for the blade depends on the material, it may be necessary to adjust it later.
- Secure the blade setting by tightening the gold lock nut.
- Press the pin on the rear end of the blade holder to remove and replace the blade at any time. Caution - risk of injury!

The various material thicknesses require different blade settings or even special blades; it may therefore be necessary to repeat the adjustment described above.

Inserting the blade holder

- First, sufficiently loosen the clamping screw for the blade holder on the cutting head.
- Next, press down the blade holder from above into the hole on the right side until there is contact and pull the lock nut tight. In doing so, please ensure that the blade holder is also secured correctly by means of the fixture provided for this purpose.
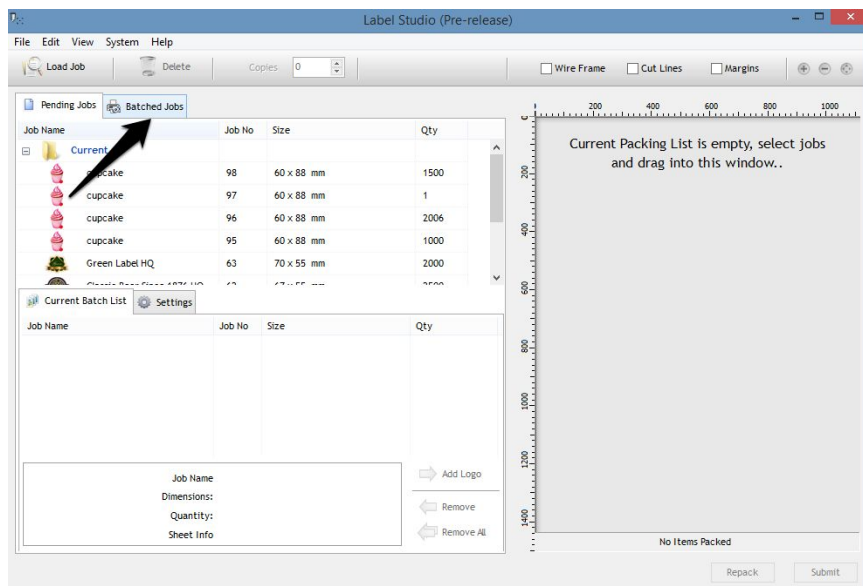
a) Blade holder
b) Clamp

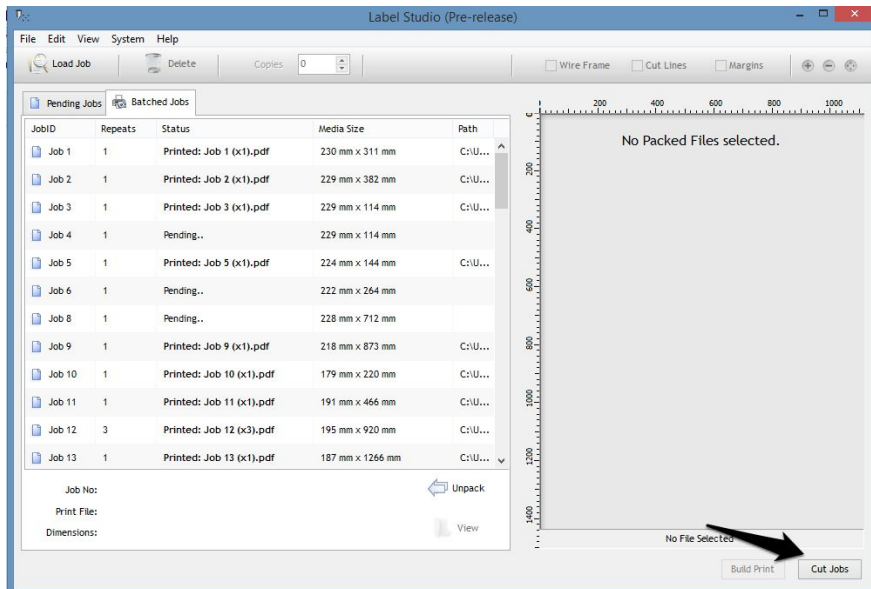## Calibration of the LC30 via DrawCut LabelStudio

Laser offset calibration
The laser's offset must be calibrated prior to the first use of the Secabo LC30.
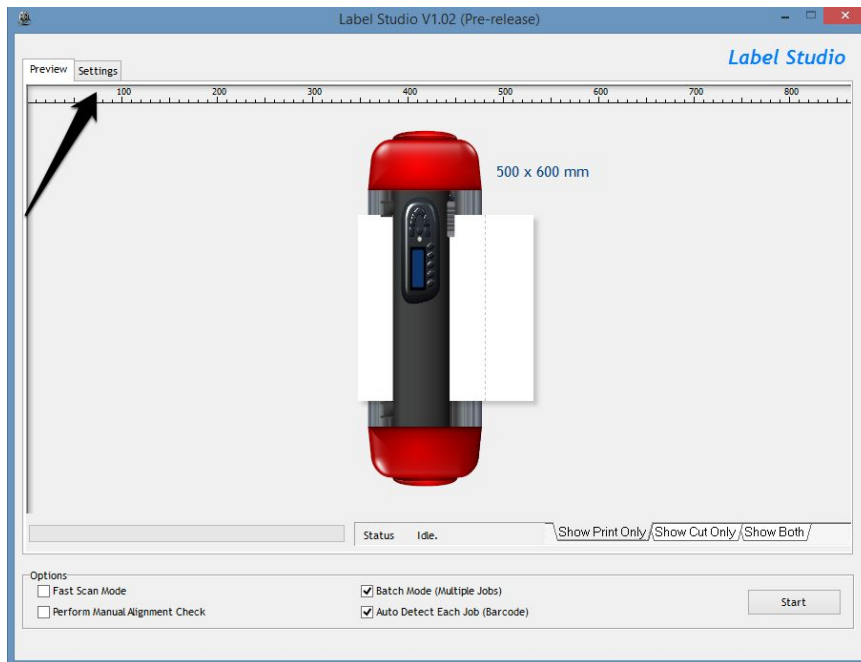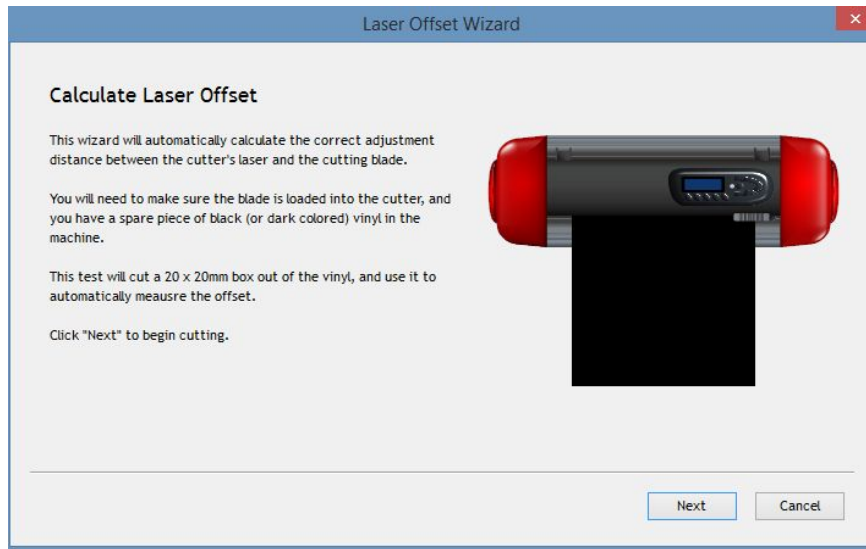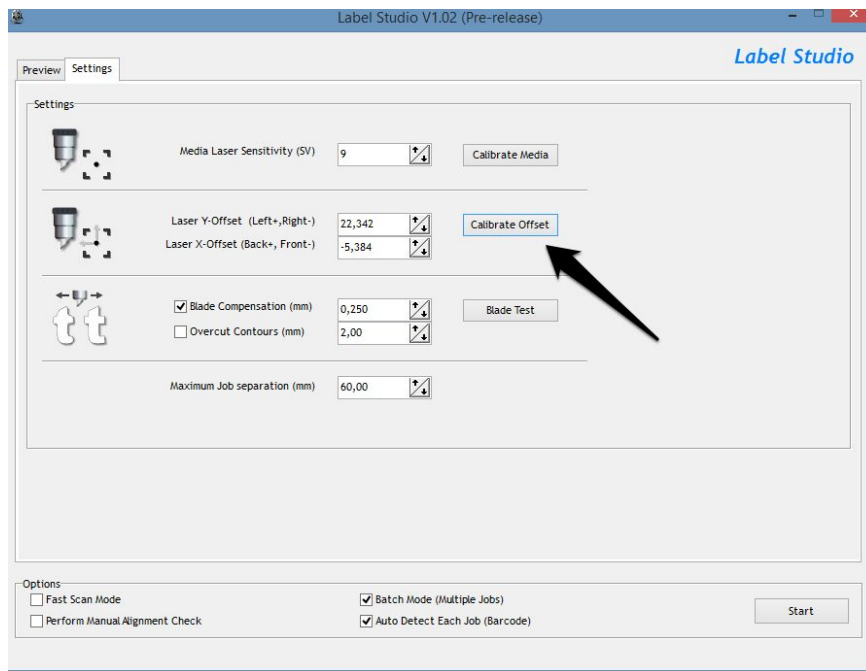
- To do so, click on *Batched Jobs*

- Click on *Cut Jobs*

- A *Preview* will open. There, click on *Settings*.

- Click on *Calibrate Offset*. Now, follow the instructions of the *Laser Offset Wizard*. The values specified in image below merely serve as reference values.

Setting the blade offset

- In the *Settings*, you can also perform a blade test. To do so, click on *Blade Test*. The value of 0.250, i.e. the value of original Secabo drag knives, is used as a reference value for the blade offset.
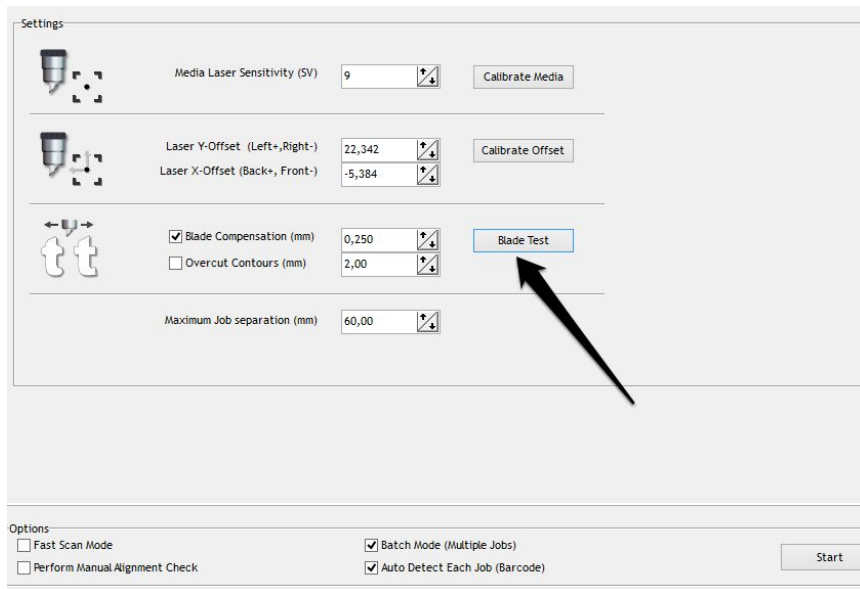
- The most important basic settings are now saved and you can begin finishing your print job previously created with Drawcut LabelStudio.

Inserting the foil

- Insert a printed roll of foil in the winding shaft on the left by tightening the two clamping spigots accordingly.

- Also using the clamping spigots, load empty cardboard tubes on the other two shafts. Be sure that all three pairs of clamping sets are tight and that the cardboard tube's width is fitting for the medium.
- Ensure that the three pairs of clamping sets are precisely aligned, so that the media can be fed through the LC30 completely straight.
- Insert the foil in the LC30 according to the following diagram:
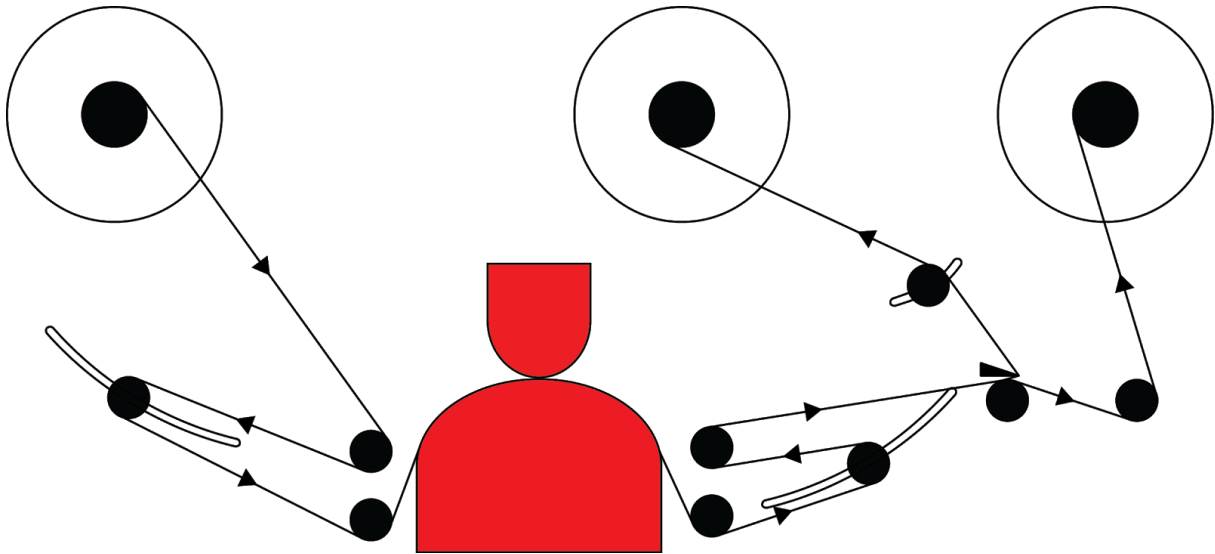
- Make sure that the clamping lever of the cutting device is open when the loading the foil, i.e. so that the medium in the cutting head won't be guided.
- Firmly stick the foil medium onto the winding for excess foil in the middle, as well as the carrier medium onto the winding for finished labels in a straight manner.

- After inserting the foil as described above, operate the dancer roller for the winding for finished labels by hand and run 1-2m of material through the LC30 by doing so to allow the medium to straighten itself.
- Make sure that the foil lies in a good place that is as symmetrical to the positions of the rollers in the cutting device (marked by white arches) as possible, and that at least one pressure roller is positioned left and right directly above it.

- Then close the black clamp lever on the cutting head and complete the inserting the foil thereby.

Cutting test

- Execute the cutting test in the „Online Mode" by clicking the „Test" button. The vinyl cutter will cut a triangle with a rectangular border into the inserted foil/vinyl at the currently saved zero point.
- You can check the adjustment of the blade holder as well as the contact pressure with this cutting test. The inserted material should be cut cleanly and straight   during the cutting test; the carrier material should not be damaged.
- If the carrier material has been cut, either the contact pressure is set too high or the blade or blade holder are set incorrectly. Change these settings and perform the cutting test again.
- Also readjust if the vinyl was cut imprecisely or to an insufficient depth.

Settings and Operation

Online / offline

After switching on the unit a reset is performed and the unit switches to the online mode. By selecting the "on-/offline" button on the panel, you can switch between online and offline mode. During the cutting operation, the vinyl cutter must generally be in the online mode. To change the configuration settings, the unit must be set offline.

Moving the Cutting Head

In the offline mode, the cutting head can be moved left and right by pressing the „Force" arrow keys, as well as forwards or backwards by pressing the „Speed" arrow keys. The corresponding X and Y coordinates are shown on the display.

Setting the zero point

In order to set the correct starting point for plotting, in offline mode, move the cutter head and foil in such a way, that the laser point is located in the so-called start box in front of the bar code on the inserted medium. Now confirm the zero point by pressing the crosshair, which will cause the device to automatically switch to online mode.

Adjust speed and contact pressure

You can make the following changes in the online mode by pressing the corresponding buttons:

Increase speed	Reduce speed	Increase contact pressure	Reduce contact pressure

The cutting speed and contact pressure cannot be changed while a plotting job is in progress.

Other settings

In the online mode, pressing the set button repeatedly will let you page through additional configuration menus.

- In the second menu point, one can calibrate the vinyl cutter correctly. Correction may be required here due to wear to the mechanical parts. The X and Y scaling of the data can be changed by changing the XP and   YP values. If, for example, an object for which a length of 100 cm was entered on the computer is cut on the vinyl cutter to a length of only 98cm, it is necessary to correct the corresponding scaling value on the plotter. Otherwise, these values should not be changed.

Reset button

The reset button lets you cancel your job at any time. This function can be helpful when, for example, a job was accidentally generated too large.

Reset

Creating a print job in DrawCut Label Studio

PDF files, which must contain at least one vector contour for cutting, the color of which can clearly be distinguished the rest of the file, can be imported into DrawCut Label Studio.

- First click *File -> Load Artwork* to import the logo you created in PDF format into the software.
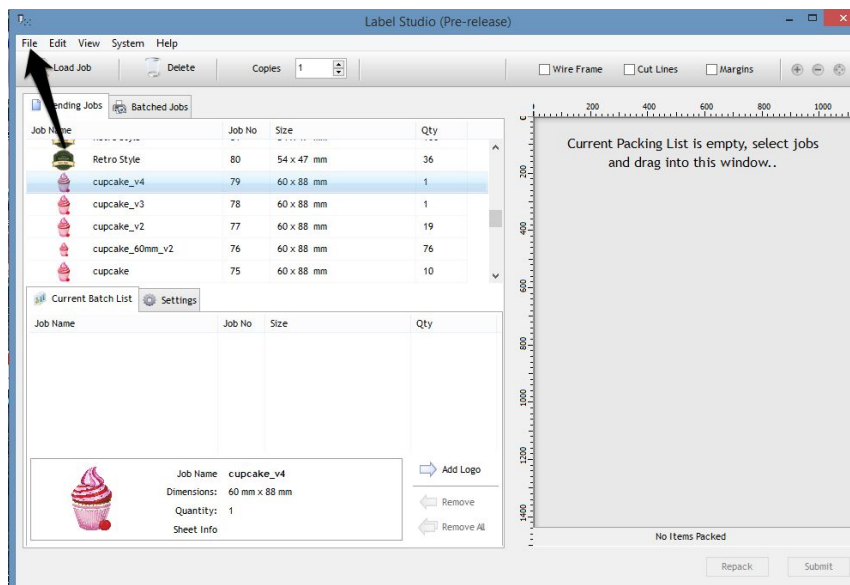

- The *Cutting Contours* menu opens.
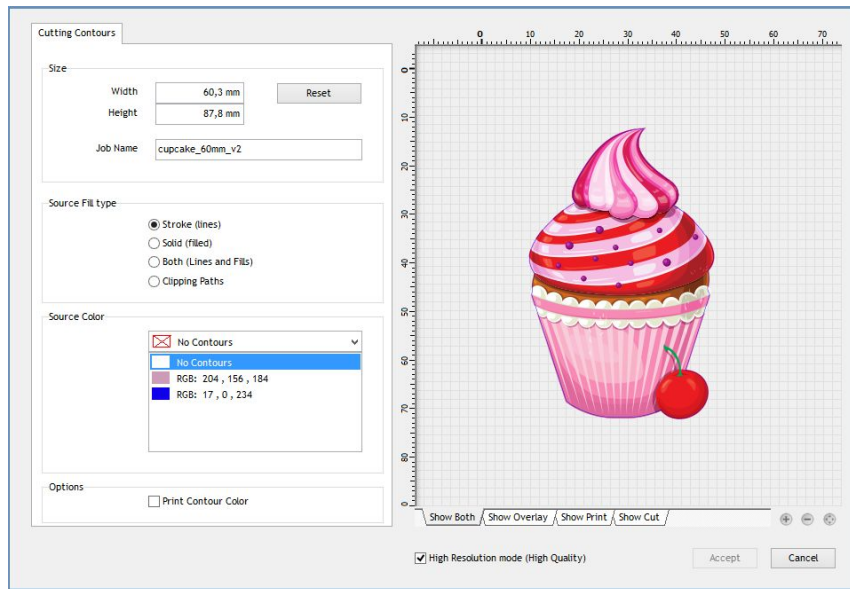
- Now you can define the contour that is to be cut. In the example, the contour was created as outline in RGB 17, 0, 234. Select the contour you created in Drawcut Label Studio. Disable the *Print Contour Color* if the outline should not be printed. In the tab *Show Cut*, you can verify the contour to be cut. Confirm your selection with *Accept*.
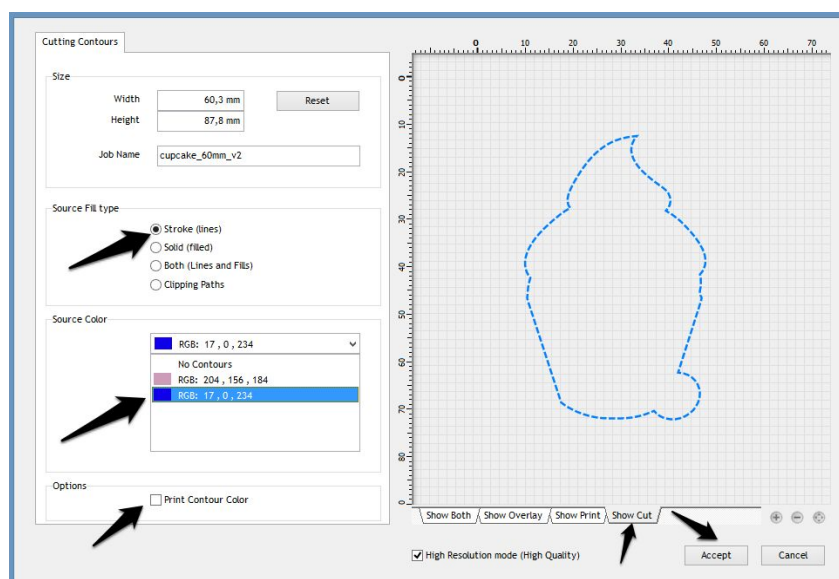

- By confirming the logo with *Accept*, the logo will be moved to the folder *Current* in the *Pending Jobs*.
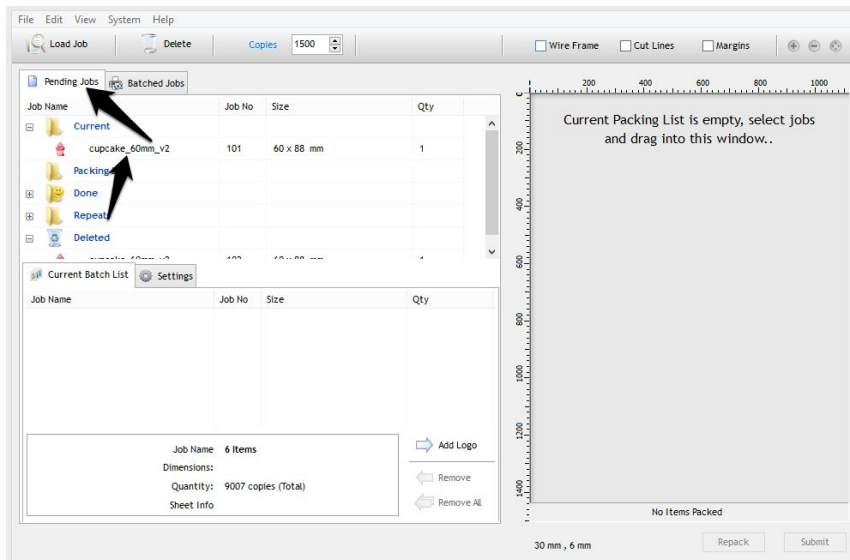
- In the *Settings* under *Pending Jobs*, the following *Packing Options* must now be configured.
  a. *Media Width*: Setting the media width
  b. *Job Spacing*: Setting the lower edge
  c. *Block Height*: Distance between the read marks, this should not exceed 120mm.
  d. *Top Margin*: Setting the upper edge
  e. *Double Marks*: When activating the check box, reading marks are set on both edges, which will lead to a higher accuracy, however, reduces the speed.
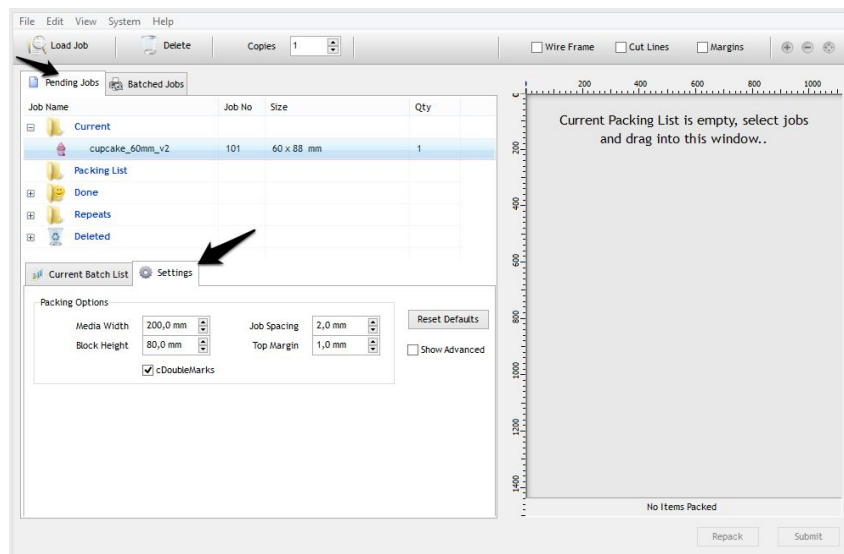

- Now switch to the *Current Batch List*. Under *Copies* you can set the desired number of copies. Click on *Add Logo* to load the number you chose into the job.
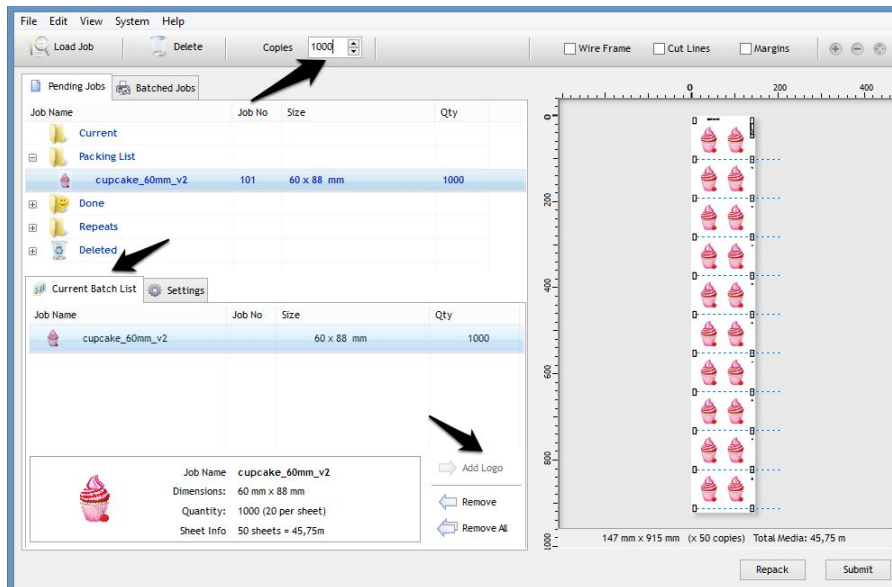
- The preview now displays the data of the printout. In the example, the job is split to 50 copies, as one copy can't be larger than one meter. The required length of the medium for this amounts to a total of 45.75 m and will also appear as such in the preview.
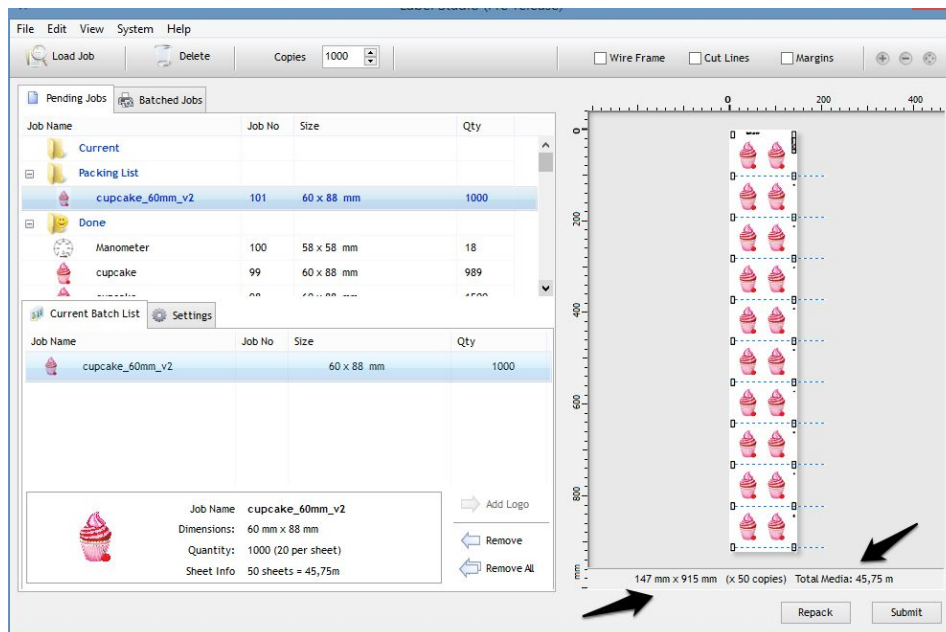
- Finally, confirm the print job by clicking on *Submit*.
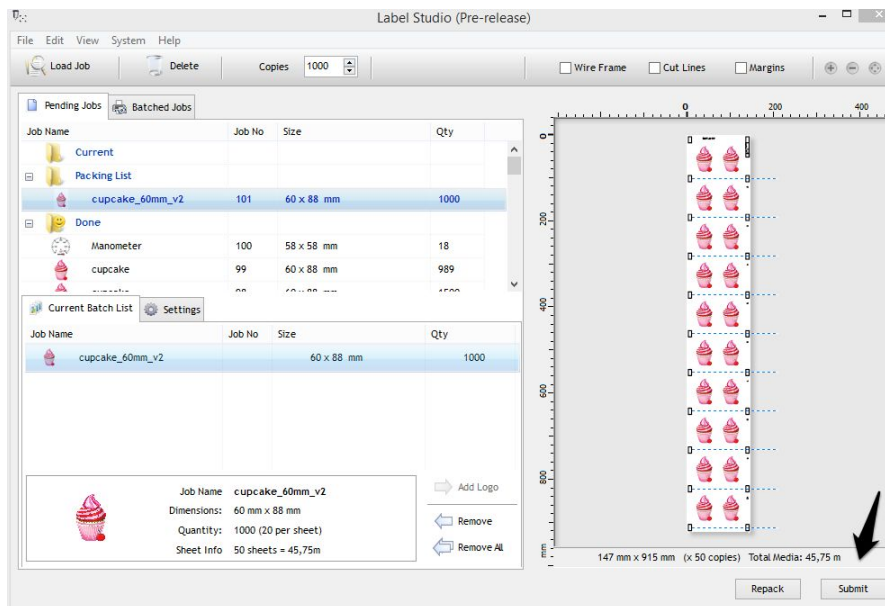
- In the last step, click on *Build Print*, whereupon the window *Print Options* will open. In the *Print Options* you can define whether you want to initially save the job as PDF, save as PDF and print, or save as TIF. In addition, you can set whether the job should be printed on a roll or a sheet. Confirm your selection with *Accept*. After that, the job must simply be saved in the folder designated for it.
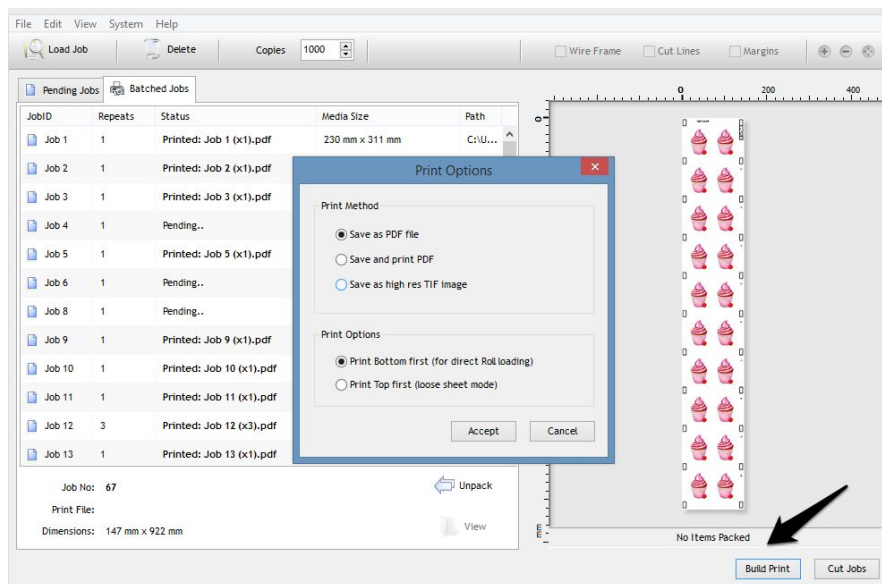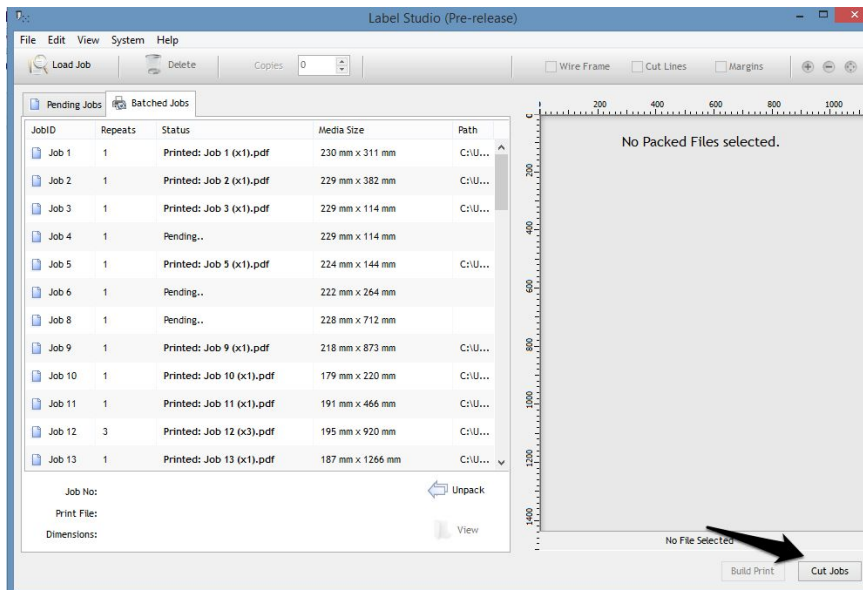
Starting a cutting job from DrawCut Label Studio

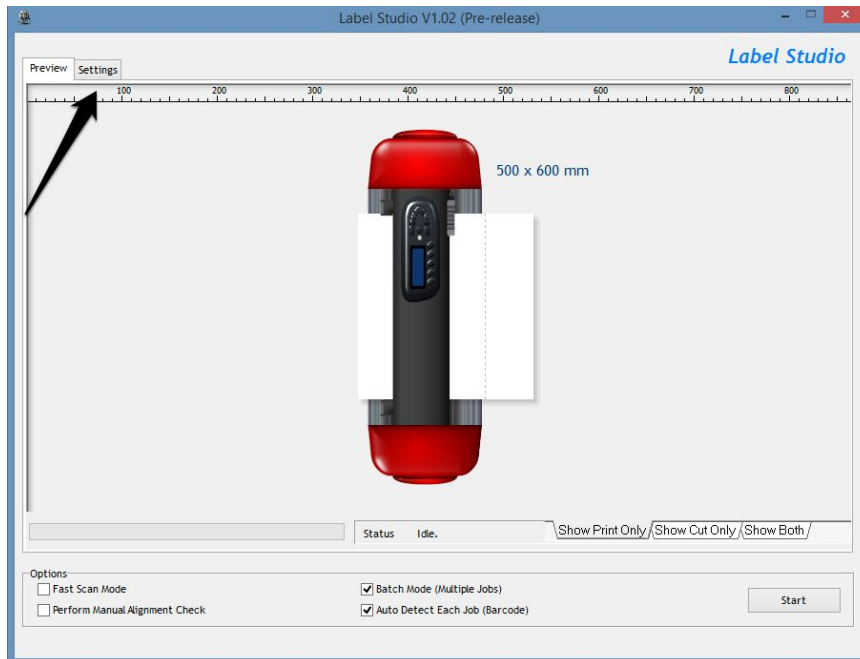First, insert the already printed medium in the Secabo LC30 as described above.

- Click on *Batched Jobs*
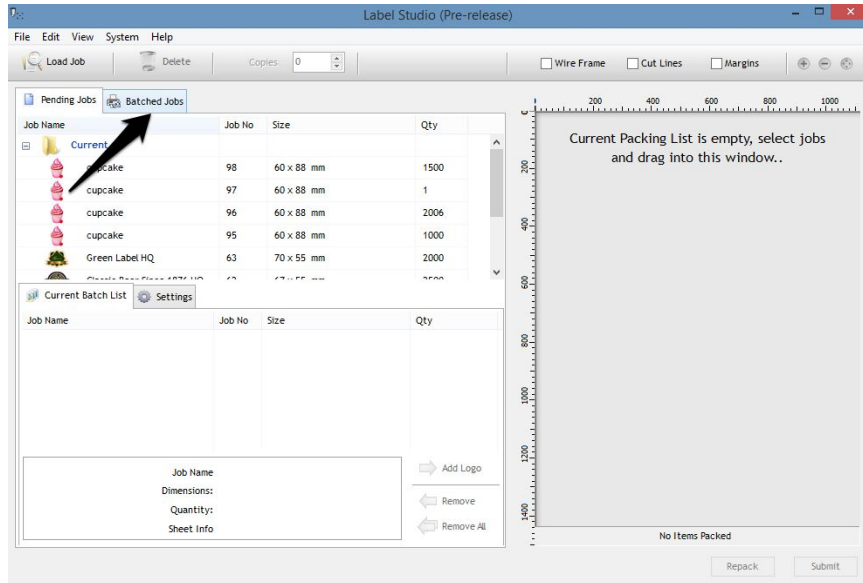

- Click *Cut Jobs*

- A *Preview* will open. There, click on *Settings*.

- Under *Media Laser Sensitivity (SV)* **you can** calibrate the sensitivity of the laser to a wide range of media. To do so, simply follow the instructions of the *Media Calibration Wizard*. This calibration should be carried out if you encounter problems reading the marks, for example when switching from matte to glossy media.
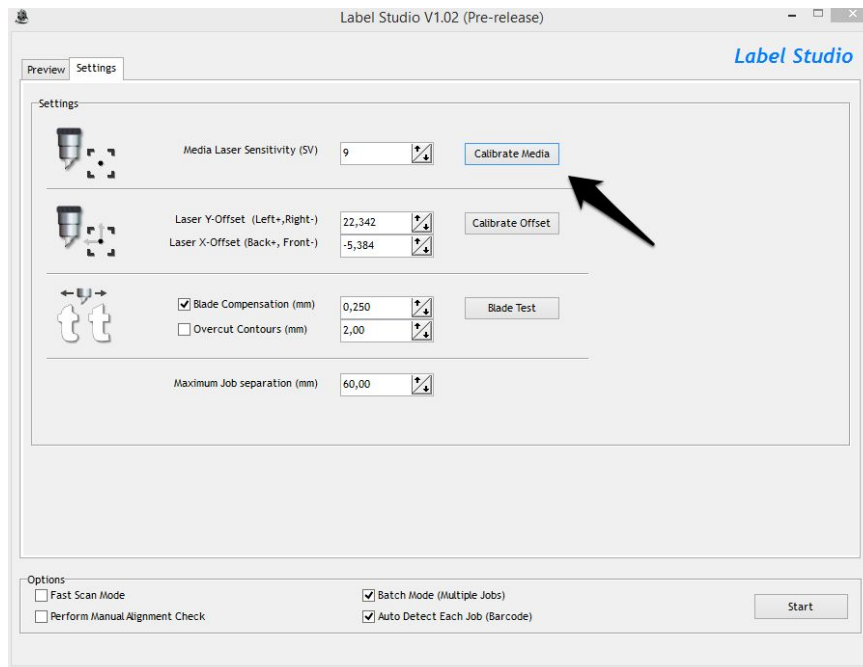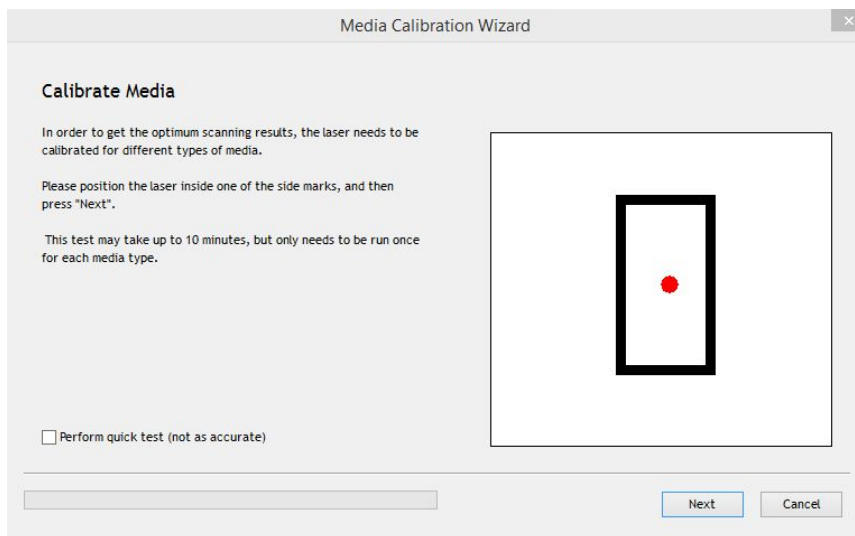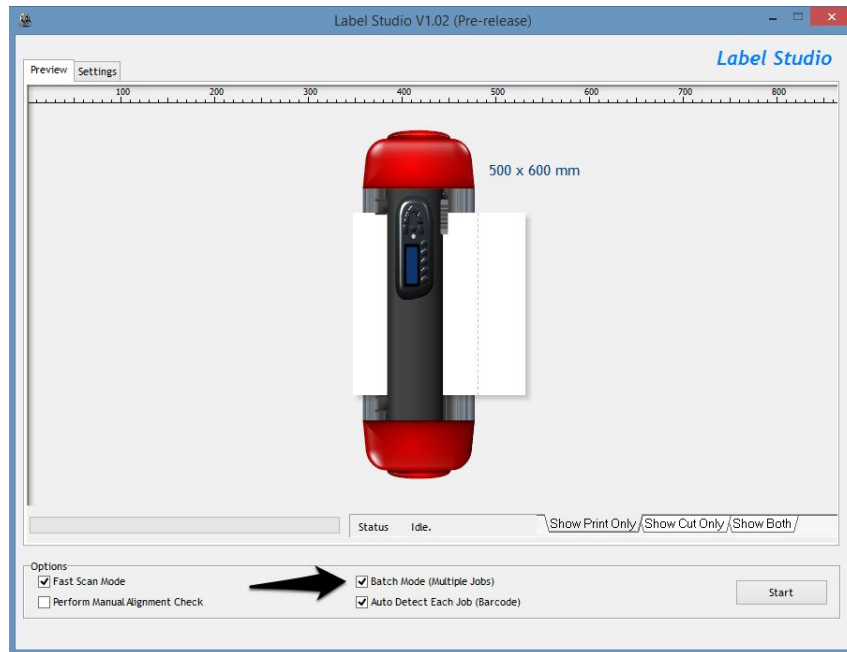
- Return to the *Preview*.
- Checking the check box *Fast Scan Mode* allows you to modify the time it takes to read the marks.
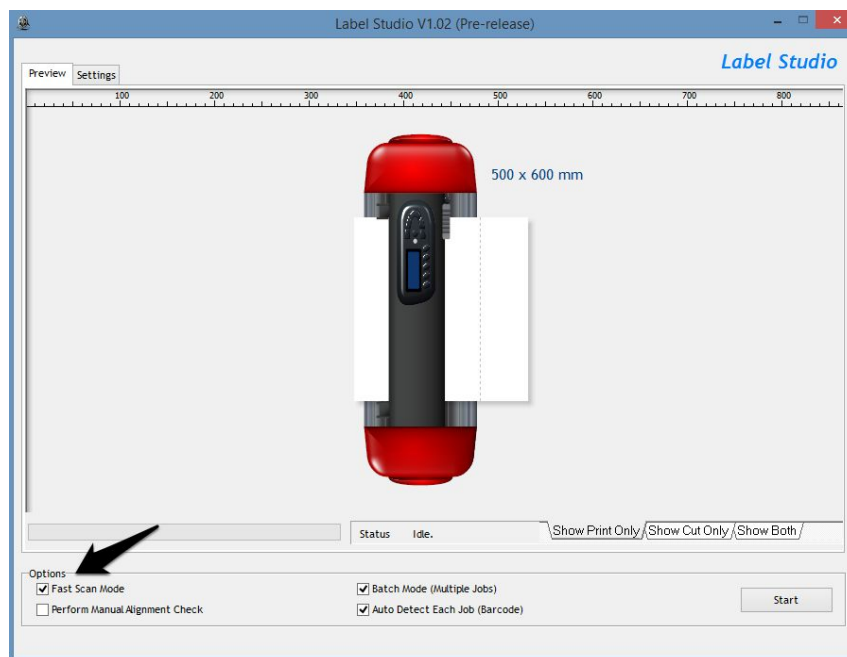
- The box next to *Batch Mode (Multiple Jobs)* must be checked if Drawcut Label Studio divided your print job into several copies due to its size. If the box is not checked, the Secabo LC30 will stop after completing the first copy.

Jobs can be imported into Drawcut Label Studio in two different ways:

- First, position the Secabo LC30's laser for both variants (activate by pressing the *Laser* button on the cutting unit) within the start rectangle.


- Activation of *Auto Detect Each Job (Bar Code)*.
- In the software, click on *Start*. The Secabo LC30 will now read the bar code located on the printout above the starting rectangle, automatically import the job and begin cutting.
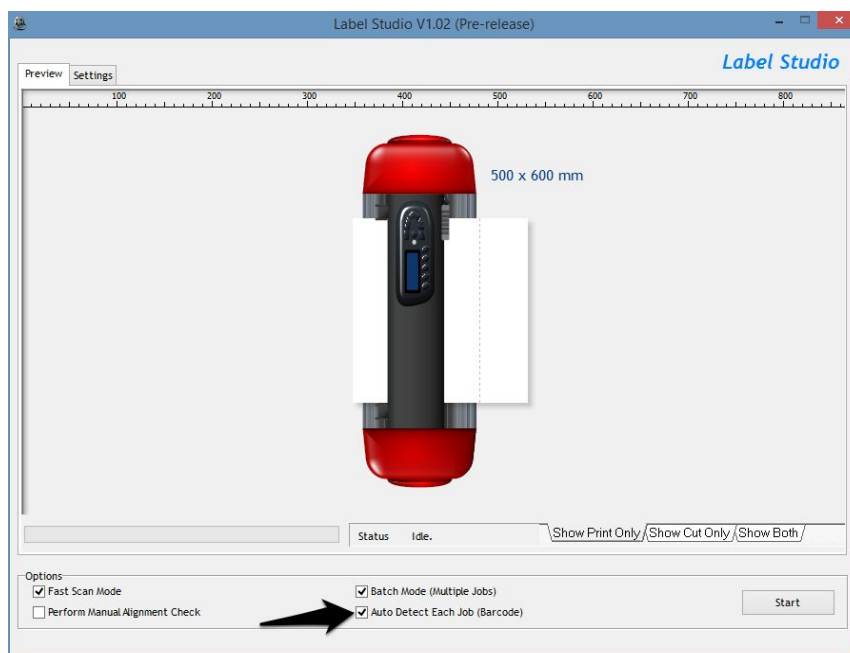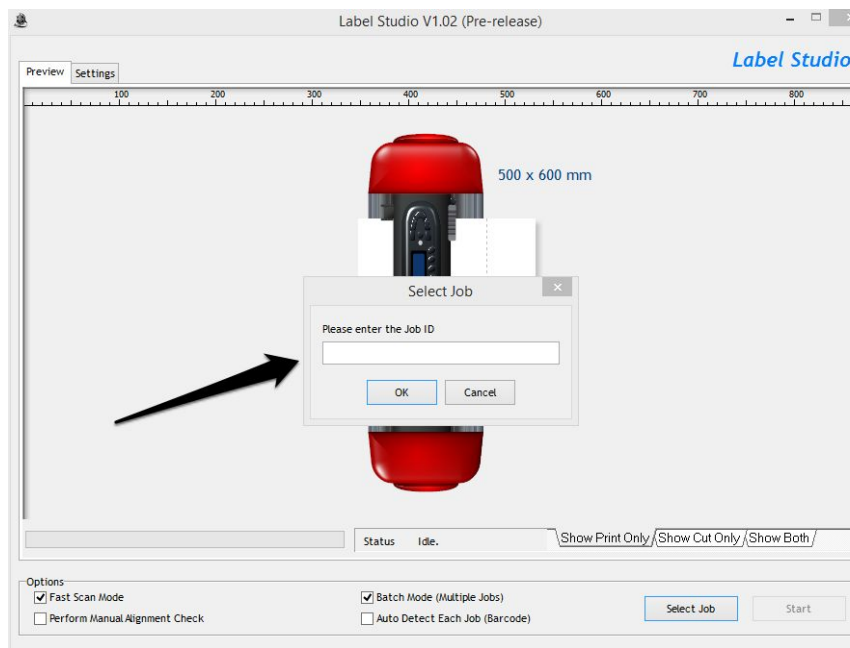
- Alternatively, a job can also be loaded manually. For this, the box next to *Auto Detect Each Job (Bar Code)* is not checked. In the dialog, the button *Select Job* will appear.
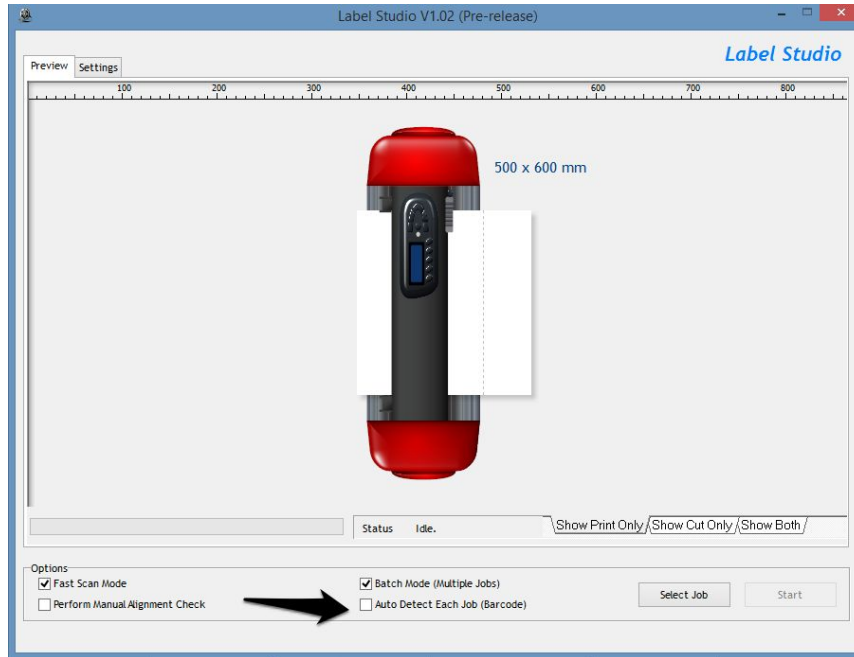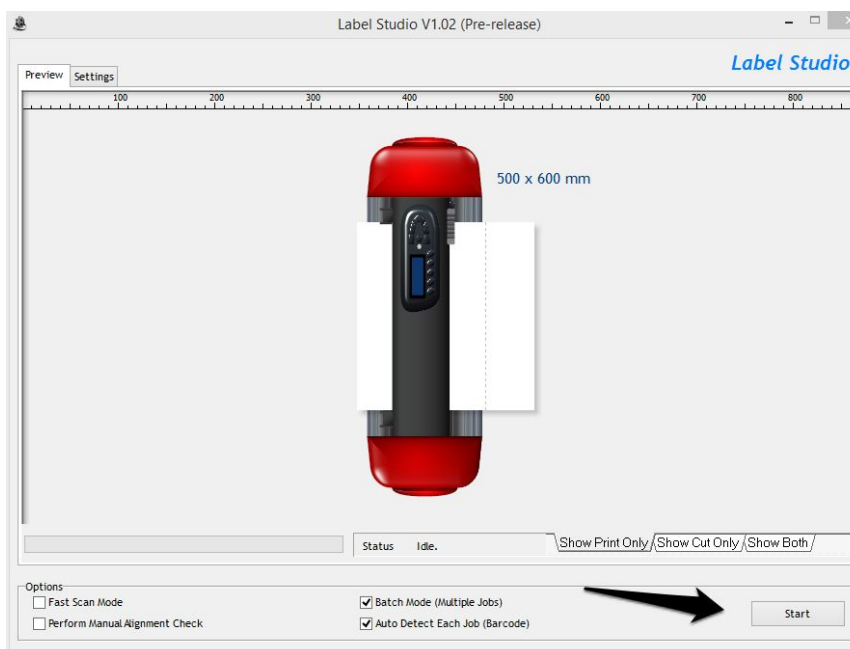

- Click on *Select Job*. Then a window will open, in which you must enter your *Job ID* and confirm by clicking *OK*. Then, the job will be loaded into DrawCut Label Studio.
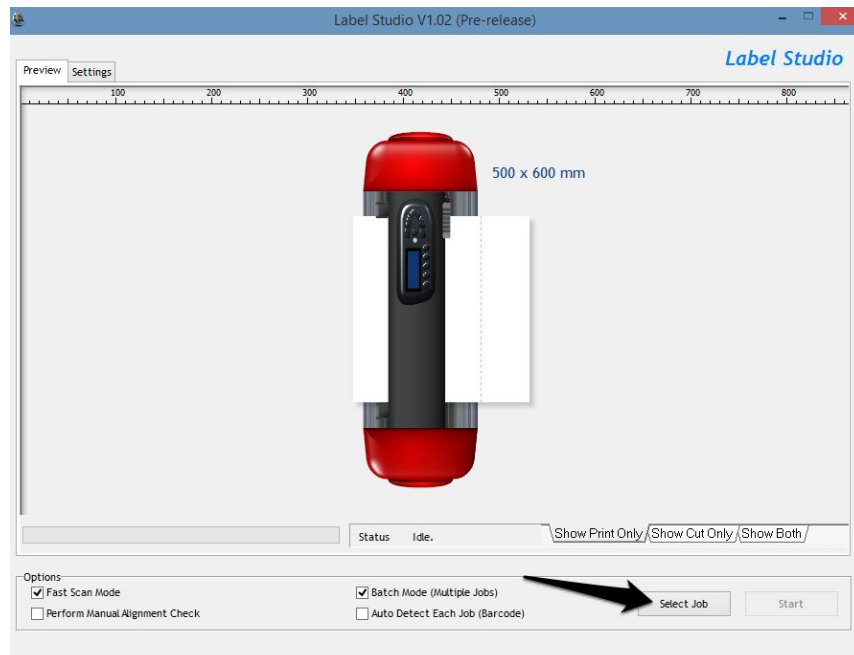
- In each case, you can start the cutting process by pressing the *Start* button.

Drag knife

Drag knives are sensitive, sharp and dangerous precision tools.

- Keep the blade out of the reach of children!
- To avoid personal injury, caution must be taken in handling the blades.

Handle the drag knives carefully and always store them with the protection cap when not in use. Should the tip of a blade come hit hard materials such as glass or stone, it can cause tiny fractures of the tip of the blade, making the blade unusable.

Please consider the following instructions to prevent unnecessary wear and tear of your drag knives and to achieve a long durability of these products instead.

- In any case, avoid cuts into the carrier material of the foil. The deeper you cut into the used material, the higher will be the wear and tear of the blade.
- Adjust the cutting depth of the blade so that the material is merely cut cleanly. if the blade protrudes any further, it reduces the durability of the blade and good cutting results can no longer be guaranteed.
- For thicker materials, use knives specially   suited for it (e.g. flock knife for flock).
- Frayed edges after cutting the foil indicate a blunt drag knife. Replace worn blades immediately!

Technical data

Model	LC30
Type	Roll to roll labelcutter with servo motor and automatic multi pass marker detection
Max. Media width	400mm
Max. Cutting width	305mm
Connections	USB
Display	backlit, graphic LCD screen
Memory	4MB
Max. Speed	960mm/s
Max. Media thickness	1mm
Contact pressure	50g-750g
Mechanical Resolution	0,0125mm
Repetition accuracy	< +/-0.08mm
Power supply	AC 90V - 240V / 50Hz - 60Hz
Environment	+5°C - +35°C / 30% - 70% relative humidity
Weight without packaging	75kg
Weight with packaging	110kg
Dimensions (W x H x D)	103cm x 50cm x 67cm

Konformitätserklärung - Statement of Conformity

Hiermit erklären wir in alleiniger Verantwortung, dass das Produkt Secabo LC30 mit den Bestimmungen der folgenden EG-Richtlinien und Normen übereinstimmt:
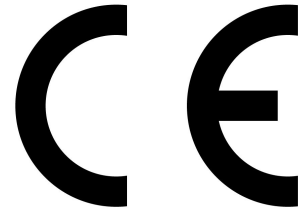
We herewith declare under sole responsibility that the product Secabo LC30 meets the provisions of the following EC Directives and Harmonized Standards:

EG-Richtlinien / EC directives:
2014/35/EG Niederspannungsrichtlinie /
2014/35/EC Low Voltage Directive
98/37/EG Maschinenrichtlinie (2006/42/EG vom 12/29/2009) /
98/37/EC Directive on machinery (from 2009-12-29: 2006/42/EC)

Norm / Standard: EN 60204-1:2006

Technische Dokumente bei / Technical documents at:
Secabo GmbH, Hochstatt 6-8, 85283 Wolnzach, Germany

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Dipl. Ing.(FH) Bernhard Schmidt